What is claimed as the invention is:

1. A method for comparing two electrical signals, said method comprising the steps of:

(a) comparing the signals to each other and to at least one threshold to produce samples representative of the signals;

(b) converting a plurality of samples into a first count; and

(c) comparing the count to at least one threshold.

2. The method as set forth in claim 1 wherein comparing step (a) includes the steps of:

comparing the signals in an analog comparator;

sampling the output of the comparator to produce a binary representation of the comparison.

3. The method as set forth in claim 1 wherein comparing step (c) includes the step of (d) providing a binary indication of the results of the comparison.

4. The method as set forth in claim 3 and further including the step of:

(e) controlling a first accumulator and a second accumulator with said binary indication;

wherein the first accumulator counts consecutive binary indications of the same value; and

the second accumulator increments or decrements in accordance with the binary indication.

5. The method as set forth in claim 4 and further including the step of:

(f) logically comparing the counts in the accumulators to produce a binary signal.

6. The method as set forth in claim 5 wherein step (f) includes the steps of:

comparing the count in the first accumulator to a threshold and producing a first single bit representation of the comparison;

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comparing the count in the second accumulator to a threshold and producing a second single bit representation of the comparison;

logically combining the first bit representation with the second bit representation.

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7. In an accumulator including an up-down counter and logic for preventing roll-over, the improvement comprising:

a first boundary for roll-over, wherein said boundary is less than the capacity of said up-down counter; and

10   a first multiplexer coupled to said logic for preventing roll-over for supplying a first predetermined count to said up-down counter when the count in said counter is incremented past said first boundary.

8. The accumulator as set forth in claim 7, wherein said accumulator includes

15   logic for preventing roll-under, said improvement further comprising:

a second boundary for roll-under, wherein said boundary is greater than the minimum count of said up-down counter; and

a second multiplexer coupled to said logic for preventing roll-under for supplying a second predetermined count to said up-down counter when said

20   counter is decremented past said second boundary.